

ABSTRACT OF THE DISCLOSURE

A small-scale positioning device employing a platform, a leveraging mechanism and a floating actuator device. The platform is movably attached to a fixed frame by a lever, a pair of levers, or more. The floating actuator device is coupled between at least one lever and the platform. When the actuator device is activated, it generates a force on the platform and an equal but opposite force on the leveraging mechanism, causing one or more levers to rotate around their respective fulcrums, thereby controlling the position of the movable platform relative to the fixed frame. The amount of displacement of the platform is dependent upon the effective expansion or contraction of the actuator device and the lever ratio. If the pair of levers are symmetrical, then motion is created in only a single degree of motion. Flexures may be included to prevent motion in unwanted directions.